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(71) Applicant: **NISSHINBO INDUSTRIES INC.**
Chuo-ku, Tokyo (JP)

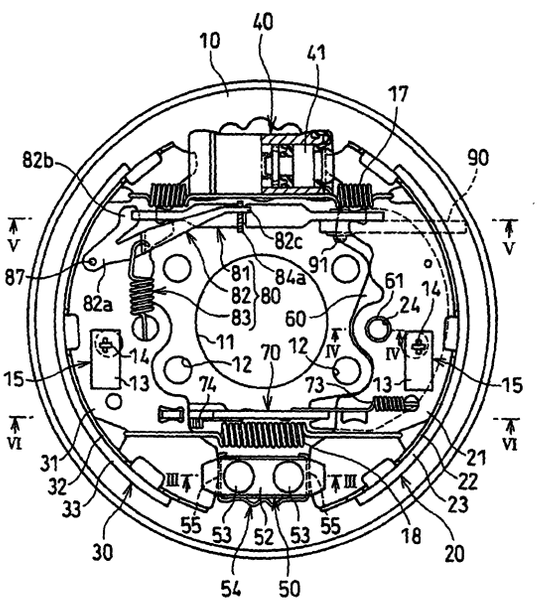
(72) Inventor: **Ikeda, Takashi,**
c/o Nisshinbo Industries Inc.
Nagoya-shi, Aichi (JP)

(74) Representative: **Henkel, Feiler, Hänzel**
Möhlstrasse 37
81675 München (DE)

(54) A dual mode drum brake device

(57) It is an object of this invention to provide a drum brake device which solves a problem of decreasing the strength of a back plate near an anchor block and excludes damages in the parking brake cable. A pivot lever (60) is pivotally mounted on one brake shoe (20). Upper and lower portions of the pivot lever (60) functionally engage with the other brake shoe (30) via struts (81,70). A parking brake actuator (90) which pivotally supports on the upper strut (81) and activates upon an activation of a parking brake is arranged to be adjacent to a service brake actuator (40) which activates upon an activation of a service brake. Preferably an operational part of the parking brake actuator (90) is projected out from the brake.

Fig. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 00 10 0028

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
D,A	EP 0 836 027 A (NISSHIN SPINNING) 15 April 1998 (1998-04-15) * figures 14,16 *	1	F16D65/22
D,A	US 5 070 968 A (EVANS ANTHONY C) 10 December 1991 (1991-12-10) * the whole document *	1	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

F16D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	7 October 2003	Topolski, J

CATEGORY OF CITED DOCUMENTS

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07-10-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0836027 A	15-04-1998	JP 3338947 B2	28-10-2002
		JP 10110758 A	28-04-1998
		EP 0836027 A2	15-04-1998
		US 6234280 B1	22-05-2001
		US 6082505 A	04-07-2000
US 5070968 A	10-12-1991	CA 2025421 A1	19-03-1991
		DE 69004651 D1	23-12-1993
		DE 69004651 T2	10-03-1994
		EP 0419171 A1	27-03-1991
		ES 2046707 T3	01-02-1994
		JP 3113133 A	14-05-1991
		KR 161269 B1	01-12-1998
		MX 165552 B	19-11-1992
		US 5275260 A	04-01-1994

EPO FORM P0459

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